

**REMARKS**

**I. INTRODUCTION**

Claims 6, 9 and 16 have been previously canceled. Thus, claims 1 - 5, 7, 8, 10 - 15 and 17 - 27 remain pending in the present application. In view of the following remarks, it is respectfully submitted that all of the presently pending claims are allowable.

**II. THE 35 U.S.C. § 103(a) REJECTION SHOULD BE WITHDRAWN**

Claims 1-5, 7, 8, 10, 12-15 and 17-27 stand rejected under 35 U.S.C. §103(a) as obvious over U.S. Published Appln. No. 2003/0097167 to Friedman ("Friedman") in view of U.S. Patent No. 7,212,867 to Van Venrooij et al. ("Van Venrooij"). 4/17/09 Office Action, p. 4.

Claim 1 recites a medical apparatus comprising "a flexible probe for accessing a patient's esophagus via the mouth, the probe, when in an operative position, extending from a proximal end which remains outside the patient to a distal end within the esophagus" in combination with "an echocardiography transducer coupled to the distal end of the probe so that, when the probe is in the operative position, the echocardiography transducer is at a predetermined location within the esophagus relative to the heart to perform a transesophageal echocardiography procedure" and "*the sheath including an electrode that is embedded in the sheath so that the electrode is covered by a portion of the sheath*, when in an operative position, the electrode delivers a cardioversion current to the heart."

In contrast, it is respectfully submitted that Friedman discloses an electrical contact that is a contact point of a conducting wire that is exposed through an opening of a silicone sheet subassembly to contact an electrode that is clamped thereover. The contact point extends past an outer surface of the silicone sheet subassembly to contact the electrode and thus cannot be covered by any portion of the silicone sheet subassembly. Specifically, Friedman describes a

distal portion 14 of an elongated flexible member 10 as being wrapped with a silicone sheet subassembly 30 that includes electrical contacts 25 and conductors 24 to each contact 25. *Friedman*, p. 3, ¶ [0032]. Clamped over the electrical contacts 25 of the silicone sheet subassembly 30 are electrode rings 26. *Id.* at ¶ [0031] and [0032]. The Examiner contends that the electrical contacts 25 can also be used as electrodes and that side portions of the contacts 25 can be considered covered by the sheet 30. *4/17/09 Office Action*, p. 3. It is respectfully submitted, however, that the electrical contacts 25 are a point on each of the wire conductors 24 that are exposed via an opening in the silicone sheet assembly 30. *Freidman* describes the silicone sheet subassembly 30 by stating that “[w]ire is passed through the top layer of silicone with a contact point exposed.” *Freidman*, p. 3, ¶ [0033]. *Freidman* further states that “silicone strips are secured with adhesive silicone and can act as a fixing mechanism for the wires as well as aiding the connection between the contact point and the electrode.” *Id.* It is respectfully submitted that the adhesive silicone strips would be entirely unnecessary to fix the wires 24 if the contact points 25 of the wires 24 were embedded in the silicone sheet subassembly 30 as the Examiner suggests. Rather, as shown in Fig. 2D, the adhesive silicone strips fix the wires 24 such that contact points 25 extend past an outer surface of the silicone sheet subassembly 30. Thus, it is respectfully submitted that contact points 25 are not covered by any portion of the silicone sheet subassembly.

It is respectfully submitted that Van Venrooij does not cure the deficiency of *Freidman* as discussed above. Van Venrooij does not show or suggest electrodes that are embedded in a sheath such that the electrodes are covered by any portion of the sheath. Rather, Van Venrooij describes a directional brain stimulation lead assembly for implantation in the brain including a lead body 20 with electrodes 24 formed therealong, about an exterior wall of the lead body. *Van Venrooij*, col. 5, ll. 44 – 48 and col. 6, ll. 1 – 3. An insulating member 10, including a substantially tubular body 12 with a window 16 is placed over the lead body 12 so that portions of the electrodes 24 are exposed, as desired. *Id.* at col. 5, ll. 11 – 17. Van Venrooij only goes as far as to teach that the electrode 24 may be embedded in the lead body 20, but does not show or suggest that the electrode 24 may be embedded in the insulating member 10. *See Id.* at col. 5, ll. 49 – 52. Indeed, Van Venrooij teaches that specifically shaped electrodes 17 could be embedded

in the lead body 20 such that the windowed insulating member 10 would be unnecessary. *Id.* at col. 15, ll. 38 – 41. Thus, it is respectfully submitted that Van Venrooij does not show or suggest that the insulating member 10 includes electrodes 24 embedded therein such that the electrodes 24 are covered by any portion of insulating member 10.

Accordingly, it is respectfully submitted that neither Freidman nor Van Venrooij, either alone or in combination, show or suggest “*the sheath including an electrode that is embedded in the sheath so that the electrode is covered by a portion of the sheath,*” as recited in claim 1. Thus, it is respectfully submitted that claim 1 is not rendered obvious by Freidman in view of Van Venrooij and that the rejection of this claim should be withdrawn. Because claims 2 - 5, 7, 8, 10, 12, 13 and 24 – 26 depend from and include all of the limitations of claim 1, it is respectfully submitted that these claims are also allowable.

Similarly, claim 14 recites a cardioversion mechanism comprising “a flexible sheath sized to be received one of permanently and removably over a transesophageal echocardiography probe, *the flexible sheath including an electrode assembly that is embedded in the sheath so that the electrode assembly is covered by a portion of the sheath,* wherein, when the sheath is received by the echocardiography probe, electrodes of the electrode assembly are located at a predetermined location with respect to the echocardiography probe, the electrode assembly being coupled to a power source for supplying a cardioversion current to a heart when the echocardiography probe is in an operative position within an esophagus of a patient.”

For at least the same reason as discussed above in regard to claim 1, it is respectfully submitted that claim 14 is not rendered obvious by Freidman in view of Van Venrooij and that the rejection of this claim should be withdrawn. Because claims 15, 17 – 19 and 27 depend from and include all of the limitations of claim 14, it is respectfully submitted that these claims are also allowable.

Claim 20 recites a method of treating a heart of a patient, comprising the steps of “inserting into the patient’s esophagus a device comprising a flexible probe having an

echocardiography transducer coupled to a distal end thereof and a flexible sheath sized to be received one of permanently and removably over the probe, *the sheath including at least one cardioversion electrode that is embedded in the sheath so that the electrode is covered by a portion of the sheath*” and “performing an echocardiography to analyze a condition of the heart” along with “applying electric current to the at least one electrode to supply a cardioversion current to the heart when the echocardiography does not contraindicate cardioversion.”

For at least the same reason as discussed above in regard to claims 1 and claim 14, it is respectfully submitted that claim 20 is not rendered obvious by Friedman in view of Van Venrooij and that the rejection to this claim should be withdrawn. Because claims 21-23 depend from and, therefore, include the limitations of claim 20, it is respectfully submitted that these claims are also allowable.

Claim 11 stands rejected under 35 U.S.C. § 103(a) as obvious over Friedman in view of Van Venrooij, or in the alternative as obvious over Freidman in view of Van Venrooij and further in view of U.S. Patent No. 7,008,419 to Shadduck (“Shadduck”). *4/17/09 Office Action*, p. 9.

As discussed above, it is respectfully submitted that claim 1 is allowable over Freidman in view of Van Venrooij. It is also respectfully submitted that Shadduck does not cure the deficiencies of Freidman in view of Van Venrooij, as discussed above in regard to claim 1. Since claim 11 depends from and includes all of the limitations of claim 1, it is respectfully submitted that this claim is also allowable and that the rejection of this claim should be withdrawn.

### CONCLUSION

In light of the foregoing, Applicant respectfully submits that all of the presently pending claims are in condition for allowance. All issues raised by the Examiner having been addressed, an early and favorable action on the merits is earnestly solicited.

Respectfully submitted,

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By: 

Oleg F. Kaplun (Reg. No. 45,559)

Fay Kaplun & Marcin, LLP  
150 Broadway, Suite 702  
New York, New York 10038  
Tel: (212) 212-619-6000  
Fax: (212) 619-0276